

Dung beetles in Vermont and New York

Part 2: Identifying dung beetles



Bryony Sands, John Bruce, Lauren Giroux, Heather Darby



Dung beetles

Dung beetles can be found living, eating, and breeding in livestock dung on pastures in Vermont and New York. They are very important decomposers, recycling nutrients and organic matter from the dung into the soil, and reducing pests and parasites which also live and breed in dung. This fact sheet is a guide to identify dung beetle species you may find. For more information, see the separate fact sheet ‘Dung beetles in Vermont and New York—Part 1: What are dung beetles and why are they important?’.

There are approximately 170 species of dung beetle in America north of Mexico¹. In a 2022 survey of pastures in Vermont and New York State, 20 species of dung beetle were found associated with cattle dung.

Identifying beetles in dung

Not all beetles in a dung pat are ‘dung beetles’. Other beetles you may find include:



Rove beetles [Family Staphylinidae]
Long narrow beetles with short elytra and exposed abdomen. Predatory: eat other invertebrates in the dung such as pest flies, mites, nematodes, and beetles.



CC BY 4.0 s.s. Lackner

Clown beetles [Family Histeridae]
Shiny convex beetles with tip of abdomen exposed. Also predatory: eat other invertebrate eggs and larvae in the dung.

NORTHWEST CROPS & SOILS PROGRAM



CC BY-SA 2.0 M. Manske

Water scavenger beetles

[Family Hydrophilidae]

Oval convex beetles, elytra cover abdomen completely. Usually black, brown or with color pattern pictured. Abundant in cattle dung and predatory: eat other insects such as pest fly larvae.

The rest of this guide focuses on the ‘dung beetles’, with examples of the 20 species which were found in the 2022 UVM Extension dung beetle survey.

Earth-boring dung beetles

[Family Geotrupidae]

Large round or oval beetles which dig tunnels up to 2 foot deep! They lay their eggs in brood balls made of dung which they have dragged down into the tunnels. This tunneling behavior is called ‘paracoprid’.



Geotrupes stercorarius

Large beetle 16—25 mm shiny black on top with metallic often blue/purple/green underside.



Geotrupes splendidus

13—18 mm vivid metallic beetle with copper/green/yellow/red reflections.



Geotrupes semiopacus

10—18 mm black with a metallic copper/green sheen top and underside



True dung beetles [Subfamily Scarabaeinae]

Stout round medium sized beetles (usually <12 mm), also 'paracoprid' and drag dung down into underground tunnels to provision their young.



Onthophagus hecate
5—10 mm dull black, covered in small pale hairs. Male has horn-like projection on pronotum (absent in female).



Onthophagus taurus
6—11 mm dull black with a sheen and sometimes a brown hue. Male (right) has two large curved horns (absent in female, left).



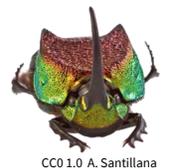
Onthophagus nuchicornis
6—8 mm head and pronotum black, elytra light brown with black mottling. Male has a single horn on head (absent in female).



Onthophagus pennsylvanicus
Smaller beetle 3.5—5 mm dull black with short pale hairs covering body.

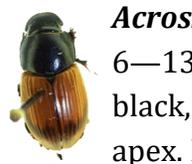


Phanaeus vindex
11—22 mm metallic green with red/yellow reflections. Male with single large horn.



Small dung beetles [Subfamily Aphodiinae]

Smaller more elongate beetles which live in dung on the pasture surface. Lay eggs in the dung pat or at the soil interface. This is called 'endocoprid' behavior.



Acrossus rubripennis
6—13 mm head and pronotum black, elytra red/brown with dark markings at apex. Head a smooth rounded semicircle.



Oscarinus rusicola



Calamosternus granarius

Similar beetles, 3–6 mm shiny dark brown to black head with angles and bumps.



Agoliinus leopardus

5—7 mm head and pronotum dark brown, elytra light brown with discrete dark markings. Head with angles and bumps.



Aphodius pedellus

6—10 mm head and pronotum black with reddish front corners, elytra red.



Blackburneus stercorosus

3—5 mm shiny reddish brown beetle with yellowish edges.



Colobopterus erraticus

6—8 mm head and pronotum black, elytra yellow/brown with black line at center. Long scutellum.



Dialytes striatulus

3—5 mm dull black with large grey pronotal punctures and ridged elytra.



Dialytes truncatus

4—6 mm dark red/brown beetle with punctures on pronotum and prominent teeth on 'shoulders' of elytra, but no ridges.



Eupleurus subterraneus

7 mm black, slightly flattened, with sparse coarse punctures on pronotum, long scutellum, and ridged elytra.



Otophorus haemorrhoidalis

4—6 mm black with red hue at apex of elytra. Long and punctured scutellum.



Teuchestes fossor

8—12 mm convex shiny black beetle with long scutellum.



May 2023. This work was funded in part by the Northeastern IPM Center through Grant #2018-70006-28882 from the National Institute of Food and Agriculture, Crop Protection and Pest Management, Regional Coordination Program. Published by the University of Vermont Extension Northwest Crops and Soils Program. Learn more about the program at: www.uvm.edu/extension/cropsoil. Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. University of Vermont Extension, Burlington, Vermont. University of Vermont Extension, and U.S. Department of Agriculture, cooperating, offer education and employment to everyone without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status. Any reference to commercial products, trade names, or brand names is for information only, and no endorsement or approval is intended.

¹Floate, KD. 2023. Cow patty critters: An introduction to the ecology, biology and identification of insects in cattle dung on Canadian pastures. Agriculture and Agri-Food Canada, Lethbridge, Alberta, Canada. 224 pp.